

WHAT IS CLAIMED IS:

1. A lead frame comprising:

a die-pad delimited for a semiconductor element to be mounted thereon;

5 a plurality of leads arranged along a periphery of an area which is to be ultimately separated as a semiconductor device for the die-pad;

a conductor portion for power/ground terminal formed to at least partially surround the die-pad in an area between the die-pad and the plurality of leads
10 corresponding to the die-pad,

wherein the die-pad, the plurality of leads, and the conductor portion for power/ground terminal are supported by an adhesive tape.

15 2. The lead frame according to claim 1, further comprising a plurality of support bars linked to the conductor portion for power/ground terminal, wherein the plurality of support bars are supported by the adhesive tape and extend to the periphery of the area
20 which is to be ultimately separated as a semiconductor device.

3. The lead frame according to claim 2, wherein a plurality of leads are additionally provided instead of the plurality of support bars, in a space which the support bars have occupied.
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4. The lead frame according to claim 1, wherein the conductor portion for power/ground terminal is

formed in the shape of a ring around the corresponding die-pad.

5 5. The lead frame according to claim 1, wherein the conductor portion for power/ground terminal is doubly formed in the form of a ring around the corresponding die-pad.

6. The lead frame according to claim 1, wherein the conductor portion for power/ground terminal is formed to partially surround the corresponding die-pad.

10 7. The lead frame according to claim 1, wherein the conductor portion for power/ground terminal is connected to at least one lead among the plurality of leads.

8. A lead frame comprising:
15 a plurality of leads arranged along a periphery of an area which is to be ultimately separated as a semiconductor device for a semiconductor element mounting region; and

20 a conductor portion for power/ground terminal formed to at least partially surround a periphery of the semiconductor element mounting region in an area between the semiconductor element mounting region and the plurality of leads corresponding to the semiconductor element mounting region,

25 wherein the plurality of leads and the conductor portion for power/ground terminal are supported by an adhesive tape.

9. The lead frame according to claim 8, further comprising a plurality of support bars linked to the conductor portion for power/ground terminal, wherein the plurality of support bars are supported by the adhesive tape and extend to the periphery of the area which is to be ultimately separated as a semiconductor device.

10. The lead frame according to claim 9, wherein a plurality of leads are additionally provided instead of the plurality of support bars, in a space which the support bars have occupied.

11. The lead frame according to claim 8, wherein the conductor portion for power/ground terminal is formed in the shape of a ring around the corresponding semiconductor element mounting region.

12. The lead frame according to claim 8, wherein the conductor portion for power/ground terminal is doubly formed in the form of a ring around the corresponding semiconductor element mounting region.

13. The lead frame according to claim 8, wherein the conductor portion for power/ground terminal is formed to partially surround the corresponding semiconductor element mounting region.

14. The lead frame according to claim 8, wherein the conductor portion for power/ground terminal is connected to at least one lead among the plurality of leads.

15. A method of manufacturing a lead frame, comprising the steps of:

forming a base frame by etching or stamping a metal plate, in which a plurality of unit base frames are linked to one another, and have a die-pad, a plurality of leads corresponding to the die-pad, and a conductor portion for power/ground terminal arranged for a semiconductor element to be mounted on the die-pad, the conductor portion at least partially surrounding the die-pad in an area between the die-pad and the plurality of leads, and being linked to the die-pad;

forming a concave portion in a portion linking the conductor portion and the die-pad on one surface of the base frame;

attaching an adhesive tape on the surface of the base frame where the concave portion is formed; and

cutting off a portion of the base frame where the concave portion is formed.

16. The method according to claim 15, further comprising a step of forming a metal film on an entire surface of the base frame, between the step of forming a concave portion and the step of attaching an adhesive tape.

17. A method of manufacturing a lead frame, comprising the steps of:

forming a base frame by simultaneously etching a

metal plate on both surfaces thereof using resist patterned in a predetermined shape for each surface of the metal plate, in which a plurality of unit base frames are linked to one another, and have a die-pad, a plurality of leads corresponding to the die-pad, and a conductor portion for power/ground terminal arranged for a semiconductor element to be mounted on the die-pad, the conductor portion at least partially surrounding the die-pad in an area between the die-pad and the plurality of leads, and being linked to the die-pad, and simultaneously forming a concave portion in a portion linking the conductor portion and the die-pad on one surface of the base frame;

attaching an adhesive tape on the surface of the base frame where the concave portion is formed; and

cutting off a portion of the base frame where the concave portion is formed.

18. The method according to claim 17, further comprising a step of forming a metal film on an entire surface of the base frame, between the step of forming a concave portion and the step of attaching an adhesive tape.

19. A method of manufacturing a lead frame, comprising the steps of:

forming a base frame by etching or stamping a metal plate, in which a plurality of unit base frames are linked to one another, and have a semiconductor

element mounting region, a plurality of leads corresponding to the semiconductor element mounting region, and a conductor portion for power/ground terminal arranged for a semiconductor element to be
5 mounted on the semiconductor element mounting region, the conductor portion at least partially surrounding the semiconductor element mounting region in an area between the semiconductor element mounting region and the plurality of leads, and being linked to at least
10 one lead among the plurality of leads;

forming a concave portion in a portion linking the conductor portion and the at least one lead on one surface of the base frame;

attaching an adhesive tape on the surface of the
15 base frame where the concave portion is formed; and

cutting off a portion of the base frame where the concave portion is formed.

20. The method according to claim 19, further comprising a step of forming a metal film on an entire
20 surface of the base frame, between the step of forming a concave portion and the step of attaching an adhesive tape.

21. A method of manufacturing a lead frame, comprising the steps of:

25 forming a base frame by simultaneously etching a metal plate from both surfaces thereof using resist patterned in a predetermined shape for each surface of

the metal plate, in which a plurality of unit base frames are linked to one another, and have a semiconductor element mounting region, a plurality of leads corresponding to the semiconductor element mounting region, and a conductor portion for power/ground terminal arranged for a semiconductor element to be mounted on the semiconductor element mounting region, the conductor portion at least partially surrounding the semiconductor element mounting region in an area between the semiconductor element mounting region and the plurality of leads, and being linked to at least one lead among the plurality of leads, and simultaneously forming a concave portion in a portion linking the conductor portion and the at least one lead on one surface of the base frame;

attaching an adhesive tape on the surface of the base frame where the concave portion is formed; and

cutting off a portion of the base frame where the concave portion is formed.

22. The method according to claim 21, further comprising a step of forming a metal film on an entire surface of the base frame, between the step of forming a concave portion and the step of attaching an adhesive tape.